

Sigmoidoscopic Examination

Routine Use for Patients in Hospital

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■ *Routine sigmoidoscopic examination as a screening method for detecting cancer of the colon was evaluated during a recent four-year period. In 18,120 patients, this examination discovered 1,087 with unsuspected benign polyps (6.0 per cent), 51 patients with unsuspected malignant polyps (0.28 per cent), and 36 patients with unsuspected cancer (0.2 per cent). These 36 cases of cancer of the colon made up 24.8 per cent of all the cancers that occurred in the lower sigmoid and rectum (within 25 cm of the anorectal junction) in the series.*

SIGMOIDOSCOPIC EXAMINATION should be the most effective method of detecting cancer of the colon, for 70 to 80 per cent of these tumors occur within 25 cm of the anorectal junction.^{1,9,11} The value of routine sigmoidoscopic examination for outpatients has been pointed out^{3,8,12} and the present report is on a study which indicated that routine use of this procedure for inpatients also is warranted.

All persons over 21 years of age admitted to the Ohio State University Hospital or to the outpatient clinics were scheduled for routine sigmoidoscopic examination. Exclusion from this examination was allowed if the patient refused, had a medical contraindication, terminal disease, previous colostomy or recent sigmoidoscopy. To facilitate the examinations, special sigmoidoscopy rooms (which could be used for other procedures) were established in the hospital and clinic. Nursing aides prepared patients for examination, assisted the examiner and maintained the equipment. Examinations were performed by staff physicians, house staff, residents and supervised medical students.

Patients were scheduled for examination at 45-minute intervals to allow the aide sufficient time for cleansing the room and preparing the next patient. Unless contraindicated, all patients were given enemas with disposable equipment.² Angulated, box-type forceps were available for obtaining biopsy specimens. Only small polyps were removed with the cold-punch, the larger ones being extirpated in the operating room under ideal hemostatic conditions.

In four years, sigmoidoscopic examination of 18,120 patients was carried out, 3,444 of whom had repeat examinations, bringing the total number of examinations to 21,564.

Table 1 presents the incidence of unsuspected colonic neoplasms detected by routine sigmoidoscopic examination. In 1,087 (97.5 per cent) of 1,114 cases in which benign polyps were visualized, the presence of the lesions had not been previously suspected. Since 86 per cent of these lesions were less than 1.0 cm in diameter, it was not surprising that there would be so low an index of suspicion by the examiner. In 51 of the 59 patients with malignant polyps within 25 cm of the anorectal junction, the lesions were unsuspected before sig-

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TABLE 1.—Neoplasms Detected by Routine Sigmoidoscopic Examination of 18,120 Patients

	<i>Suspected</i>		<i>Unsuspected</i>		<i>Total</i>	
	<i>No. of Patients</i>	<i>Per Cent of Total</i>	<i>No. of Patients</i>	<i>Per Cent of Total</i>	<i>No. of Patients</i>	<i>Per Cent of Total</i>
Benign polyp	27	0.15	1,087	6.0	1,114	6.15
Malignant polyp	8	0.04	51	0.28	59	0.32
Carcinoma	109	0.6	36	0.2	145	0.8
Total	144	0.79	1,174	6.48	1,318	7.27

moidoscopic examination (86 per cent). The average size of these lesions was greater than that of benign polyps: 64 per cent of them were greater than 1.0 cm in diameter.

It is of utmost significance that 36 cases of unsuspected carcinoma were detected by routine sigmoidoscopic examination. This number made up 24.8 per cent of those carcinomas which occurred within sigmoidoscopic range. A review of these cases elicited that the patients did not have outstanding symptoms.

Four serious complications occurred in 21,564 sigmoidoscopic examinations. Two patients with pronounced bleeding after polyp biopsy were admitted to the hospital for transfusions and repeat fulguration. Bowel perforation occurred in two patients with pre-existing pelvic abscesses and visible colonic mucosal changes. The patients were managed nonsurgically. One survived and the other died 26 days later. None of the examinations resulting in complications was performed by a medical student.

Discussion

The development and widespread use of an effective method of screening patients for colonic carcinoma would be a major step in lessening the appalling mortality of this disease. The ideal screening method must meet certain criteria. It must be simple enough so that it can be used by all physicians, whether in office or hospital practice. It must be economical and safe for the patient. It must use professional time sparingly. It must be 90 per cent or more truly positive and less than 5 per cent falsely positive. As yet, no screening test for colon cancer meets all of these requirements.

The value of routine sigmoidoscopic examination is demonstrated in this study by the overall incidence of 6.55 per cent detection rate of unsuspected colonic neoplasms, divided as follows: 6 per

cent benign polyps, 0.35 per cent malignant polyps and 0.2 per cent carcinomas. While the amount of professional time spent in detecting one malignant lesion makes routine sigmoidoscopic examination less than ideal, certainly it is the best existing screening test.

Since relatively few unsuspected neoplasms were found in the age group below 30 years, our working policy is to recommend routine sigmoidoscopic examination at two year intervals for asymptomatic persons 30 years of age and older.

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